

Tumbling Creek Cavesnail

Antrobia culveri

Guidelines for Landowners Using Conservation Practices Missouri Department of Conservation

Common name ▪ Tumbling Creek
cavesnail

Scientific name ▪ *Antrobia culveri*

Federal status ▪ Endangered

Ecology

The Tumbling Creek cavesnail is only known to exist in the silt-free sections of the underground stream of Tumbling Creek in Taney County, Missouri. They live in beneath rocks in the stream and feed on microorganisms. The cavesnails measure about 1/10 of an inch in length and have a white body with a pale yellow shell.

Reasons for Decline

The rapid decline of the Tumbling Creek cavesnail population is most likely due to the deterioration of water quality in Tumbling Creek. Removal of streamside vegetation, overgrazing by livestock, and erosion are all activities that may be increasing the silt and sediment content in Tumbling Creek. Other threats include pollution from runoff or waste disposal in nearby sinkholes and failing septic systems that contaminate the groundwater.

Recommendations

The most important factor in the recovery of the Tumbling Creek cavesnail is to protect its habitat in Tumbling Creek. It is important that nearby landowners help reduce erosion and the threat of pollution into the water system. Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers, Management Recommendations for Projects Affecting Missouri Wetlands, and Management Recommendations for Construction Projects Affecting Missouri Karst Habitat.



Photo Credit: http://www.fws.gov/midwest/endangered/snails/tcca_fct.html

Species like the cavesnail are indicators of clean, healthy aquatic systems. Their decline suggests that an underground water supply may not be safe to drink. Following these recommendations will avoid or minimize impacts to cave systems and the Tumbling Creek cavesnail.

Contain all construction debris to prevent its accidental introduction into caves, sinkholes, or springs as a result of clean-up activities, run-off, flooding, wind, or other natural forces. Dispose of chemicals, toxic wastes, garbage, and wash water from trucks in areas designated for such wastes. These sites should be away from caves and sinkholes. Protect natural hydrology to avoid lowering of the water table. If

temporary roadways must be built, ensure that roadways are of low gradient with sufficient roadbed and storm water runoff drains and outlets. Minimize sedimentation and chemical or nutrient-laden runoff into streams, sinkholes, caves, and abandoned wells by implementing and monitoring erosion and sediment controls for the duration of the project. Establish and maintain forested buffers at least 100 feet wide along streams and around cave and sinkhole entrances. Minimize erosion by revegetating disturbed areas as soon as possible.

Beneficial Practices

- Livestock exclusion from sinkholes, springs, and karst areas.
- Filter strips and riparian corridors around sinkholes and springs.
- Nutrient and pest management on adjacent agricultural fields that results in reduced opportunities for runoff.
- Practices that control erosion and prevent the delivery of sediment to the aquatic system will prove beneficial to this species.

Adverse Practices

- Sealing or altering cave entrances or sinkholes as many forms of cave life depend on the outside environment for food and nutrients.
- Re-routing runoff from one sinkhole entrance to another.
- Entering caves resulting in a disturbance to bats that provide nutrients for cave fauna.
- Discharging spillways from lakes or ponds into sinkholes.
- Disposal of chemicals, toxic waste, garbage, and wash water

from trucks in areas not designated for such waste. Designated sites should be away from caves and sinkholes.

- Overlooking erosion and ignoring sediment control.
- Application of pesticides, herbicides, insecticides, and inorganic fertilizers that alter aquatic vegetation and/or micro- or macroinvertebrates.

Information Contacts

For further information regarding regulations for development in wetlands, rivers and streams, contact:

Missouri Department of Conservation
Policy Coordination Section
P.O. Box 180

2901 W. Truman Blvd
Jefferson City, MO 65102-0180
Telephone: 573-751-4115

<http://www.mdc.mo.gov/nathis/endangered/>

Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176

Jefferson City, MO 65102-0176
Telephone: 800-361-4827 / 573-751-1300
<http://www.dnr.mo.gov/env/index.html>

U.S. Army Corps of Engineers
Regulatory Branch
700 Federal Building

601 E. 12th Street
Kansas City, MO 64106-2896
Telephone: 816-389-3990

<http://www.nwk.usace.army.mil/>

U.S. Environmental Protection Agency
Water, Wetlands, and Pesticides Division
901 North 5th Street

Kansas City, KS 66101
Telephone: 913-551-7003 / 800-223-0425
<http://www.epa.gov/region7/>

U.S. Fish and Wildlife Service
Ecological Services Field Office
101 Park DeVille Dr., Suite A
Columbia, MO 65203
Telephone: 573-234-2132

<http://www.fws.gov/midwest/partners/missouri.html>

Legal

These Best Management Practices were prepared by the Missouri Department of Conservation with assistance from other state agencies, contractors, and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat.

Compliance with Best Management Practices is not required by the Missouri wildlife and forestry law or by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.

Species listed under the Federal Endangered Species Act must be considered in projects receiving federal funds or requiring permits under the Clean Water Act, with compliance issues resolved in consultation with the U.S. Fish and Wildlife Service.